Commonwealth of Massachusetts

Division of Energy Resources

State Heating Oil & Propane Program
Final Report
Winter 2006/2007

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INTRODUCTION

The 2006/07 Winter Heating Season marked the14th year of the Massachusetts Division of Energy Resources' (DOER) participation in the U.S. Department of Energy's annual *State Heating Oil and Propane Program* (SHOPP). SHOPP requires states to collect and monitor retail heating oil and propane prices from October through March. SHOPP augments existing DOER data collection efforts and serves several important purposes. The information provides policy-makers with timely, accurate and consistent data to monitor current heating oil and propane markets and develop, when necessary, appropriate state responses to potential fuel problems. The information also helps the federal and state governments respond to consumer, congressional and media inquiries regarding heating oil and propane.

The following report summarizes the results from the Massachusetts retail heating oil and propane price surveys, including supply and demand events that affected those markets. Also included are a seasonal overview and a summary of how the SHOPP program is used to augment DOER functions.

Findings

Prices Begin Season at High Level

The winter average price of heating fuels has risen over the past few years. From 2003 to 2006, winter heating fuel average prices rose 64% for heating oil and 43% for propane. The heating oil seasonal average in 2003 was $1.45 compared to $2.42 for 2006. Propane's seasonal average in 2003 was $1.57 vs. $2.28 for 2006. Obviously the Gulf Hurricanes in 2005 had the greatest impact on price increases, but even before the hurricanes, prices were heading upwards. Despite warmer winter temperatures, which led to lower consumption over the last 2 years, consumers saw their bills continue to increase.

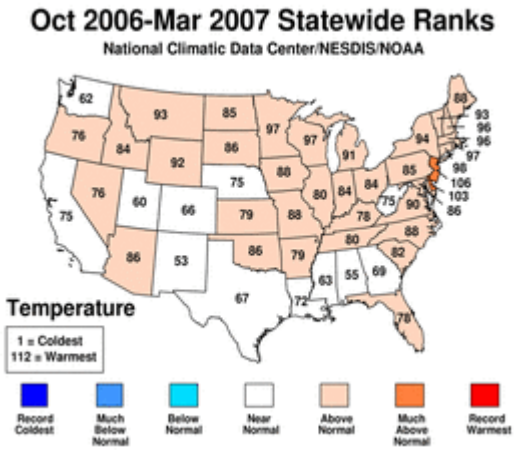
Over the years, prices at the start of the heating season were higher than the previous season, with the exception of October 2005. In October 2006, heating oil began the winter heating season at $2.36. This was down 9% from 2005's record high of $2.60. However the $2.35 is 30% above the October 2004 price of $1.82. Propane actually began the season at about the same price as last year ($2.25 vs. $2.23) but was still 35% above the October 2004 price of $1.67. Both prices illustrate how fuel prices never recovered to pre-hurricane levels.

A Tale of Two Winters

Traditionally, weather is one of key components impacting heating fuel demand and thus causing prices to rise during the winter heating season. However, over the past 2 winters, temperatures have been warmer than normal. The 2005/06 winter was 7% warmer than normal and this past winter was 5.6% warmer than normal[1]. Warmer weather usually translates to lower demand and prices while colder weather translates to higher prices. Early season forecasts from the National Oceanic and Atmospheric Association (NOAA), predicted Massachusetts and the rest of New England had an equal chance for normal, above normal, and below normal temperatures.

For Massachusetts, this winter turned out to be two distinctive seasons. From October to Mid-January, temperatures were above normal. Massachusetts was one of 4 New England states which had their warmest December on record, with temperatures 8 degrees above normal in Boston[2]. However, once cold temperatures moved in, February and March ended up being colder than normal. Figure 1 shows winter temperatures across the United States.

Figure 1



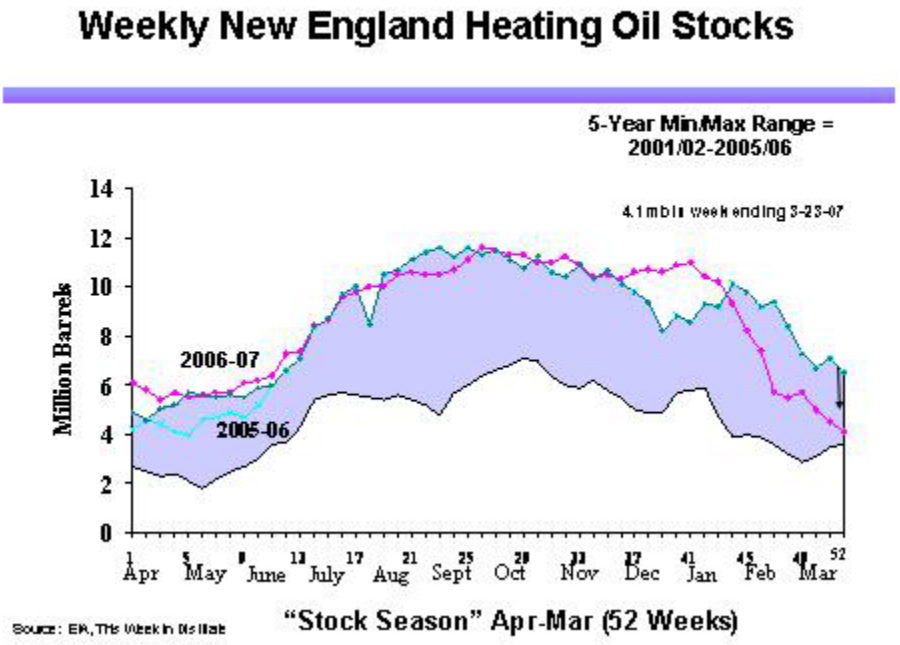
Overall, the winter temperatures were above normal for this season. However, the colder temperatures and more winter storms in the second half of the winter season impacted inventories for heating oil and propane.

[1] NOAA Heating Degree Days, www.noaa.gov.
[2] NOAA 2007 Climate Change Report: http://www.ncdc.noaa.gov/oa/climate/research/2007/perspectives.html

Inventories Start Strong, Dip Late

Heating Oil

Inventories for heating oil also illustrate how it was a tale of two winters this heating season. Heating oil stocks started the heating season at 2% below last year's level and ended the heating season at 37% below last year. However, during the warmer early winter, stocks rose to as much as 28% above the 2005/06 level heading into January. At one point in December, stocks were 28% above last year. Once the colder weather arrived in January, inventories begin to decline and ended the season 37% below the 2005/06 level. Figure 2 illustrates heating oil stock movement over the past year.



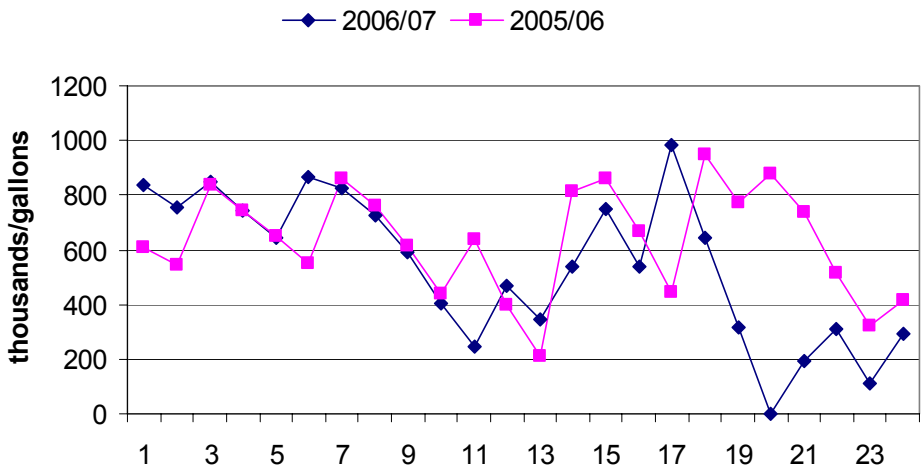
Sales of No. 2 fuel oil (heating oil) in New England account for approximately 31% of total East Coast sales, with sales in Massachusetts accounting for 36% of total New England sales. Approximately 39% percent of homes in Massachusetts heat with fuel oil.

Propane

As the season began, propane stocks on the East Coast were 37% above last year's level. Propane inventory levels fluctuate throughout the winter. Only a few New England terminals store propane brought in by ships; the rest of the supply comes in by trucks or rail. Caverns in New York and terminals in New Hampshire and Rhode Island are the primary sources of New England's propane.

Propane supplies in New England are just-in-time inventories. Any disruption to the delivery or infrastructure systems can adversely affect supplies and prices. One series of disruptions to propane supplies happened in Mid-February. A rail strike in Canada coupled with severe weather off the coast of New England limited supplies into New England. Both propane terminals in Providence, RI and Portsmouth, NH had shipments delayed due to inclement weather. These are the only two ports in Southern New England that receive and store propane for distribution. The rail strike in Canada also limited supplies going into Northern New England, Maine and Vermont. These supply disruptions led to allocations at the terminals that had supplies as well as the affected ports. Maine ended up declaring a state of emergency and other New England states issued heating fuel Driver Hours Waivers to allow truck drivers to work longer hours to alleviate the supply crunch. Massachusetts issued a five day Driver Hours Waiver after the TEPPCO pipeline that services the New York state area was knocked offline, that same week as the strike and port delay impacts were felt. Propane prices did rise but were tempered in Massachusetts by contingency plans by companies and our central location near both ports and Watkins Glen, NY (the TEPPO terminal area). Overall, the MA average price rose 2 cents from $2.25 to $2.27 for that week (From February 13-20th). Figure 3 shows the volatility of this season's propane stocks compared to last season.

Propane Stocks Comparison



Sales of propane in New England account for approximately 9% of total East Coast sales, with sales in Massachusetts accounting for 16% of total New England sales. Nearly 3% of homes in Massachusetts heat with propane.

Heating Fuel Prices Stable but High

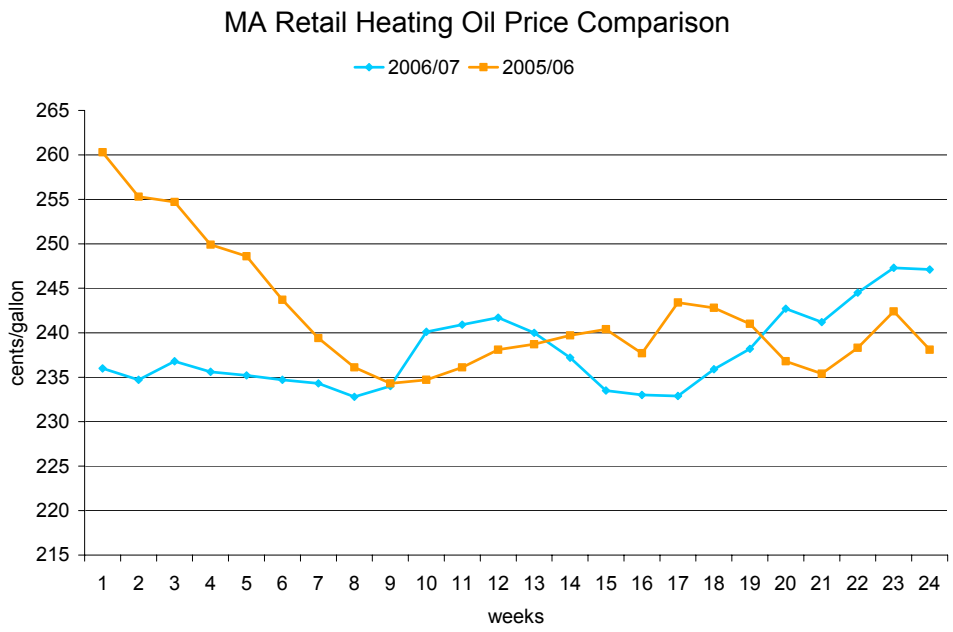
Heating Oil

In October 2006, the start of the "heating season", West Texas Intermediate (WTI) crude oil spot prices were about $60 per barrel. That price was $3 per barrel less than the price the previous October. It was also $15 per barrel less than the $75 per barrel price reached during the summer of 2006. A couple of factors influenced the $60 per barrel prices, such as expectations about a serious hurricane season and the possibility of a supply disruption occurring in any number of countries or regions. While these events did not occur, their possible occurrence lead oil companies to increase crude oil stocks. By the start of the heating season, crude oil stocks were about 23% higher than the previous year and well above the 5 year average. Even though crude oil stocks were high, demand for petroleum products remained strong so that kept crude oil prices in the $60 range.

Even OPEC's announcement of plans for a 1.2 million barrels per day (bbl/d) cut in oil production did not make much of an impact on crude oil prices. In November, WTI prices fell slightly and by the week ending November 17th, prices were about $56. They continued to hover a few dollars below or above the $60 mark throughout November and December. However, by mid-January, with a warm first half of winter and less demand, WTI prices fell to about $51 per barrel. As oil prices slipped, Saudi Arabia announced its plans to follow through on its commitment to cut oil production further beginning February 1st.

By February, the growing tension between Iran and the United States about Iran's nuclear program, violence in Nigeria, Venezuela's continued insistence of taking control of oil fields and frigid U.S. temperatures increasing petroleum demand, WTI prices climbed back to $60 per barrel. By the end of March, 2007, WTI prices were about $65 per barrel.

Heating oil prices began the season 9% lower than October 2005 at $2.36. Prices stayed around $2.35 as crude prices stabilized. Prices fluctuated for most of the season in the mid $2.30's to low $2.40's. However, at the beginning of March, crude prices started rising again and heating oil prices followed. The high and low price, respectively, for the 2006/07 winter was $2.47 per gallon compared to $2.61 the previous year and the low of $2.33 compared to $2.34. Figure 4 illustrates the price comparison for the past two winters.

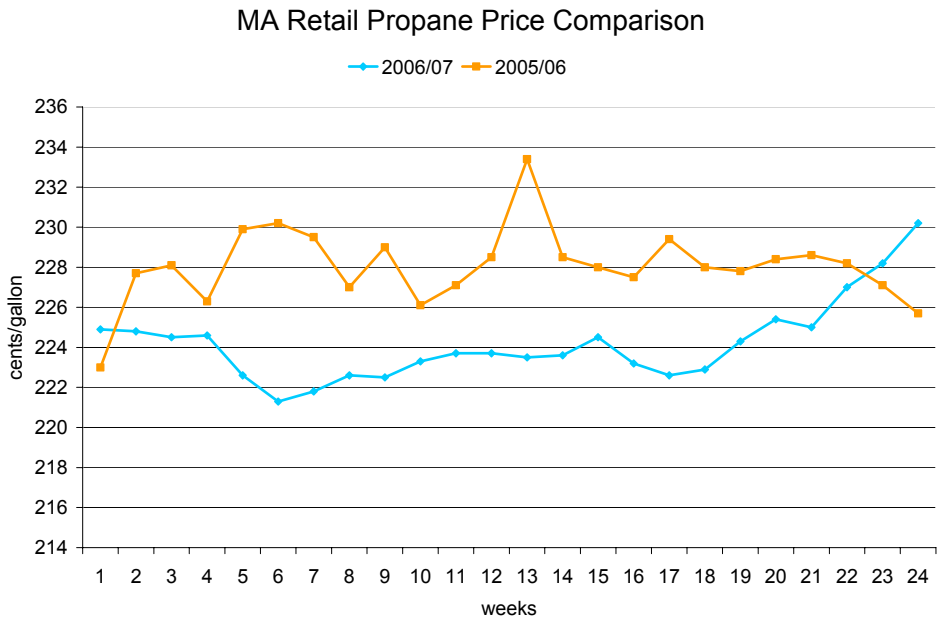


Overall, this winter's average price was 1.6% less than last year's. ***The average price of $2.38 is 4 cents lower than last year's average of $2.42.***

Propane

Propane prices started the season about the same as the previous year. In October 2006, the retail price per gallon of propane began the heating season at $2.25 compared to $2.23 in October 2005, a 1% increase.

This winter's average propane price was 2% lower than last season. The high price of the winter was $2.30 per gallon compared to $2.33 last winter and the low was $2.21 compared to $2.23. Figure 5 compares the prices over that last 2 years.



The average price per gallon for the winter 2006/07 was $2.24 compared to $2.28 last year.

Prices for the 2006/07 winter were slightly below the prices for the 2005/06. However, 2005/06 prices reached record levels following the Gulf Hurricanes and then leveled off as a warm winter tempered demand. Prices have yet to return to the 2004/05 levels. For consumers this translates into higher bills despite warmer winters over that last two heating seasons.

SHOPP Data Used to Support DOER Activities

One of DOER's most important functions is to provide accurate and timely information on energy prices and supplies to the government, media and consumers of the Commonwealth. SHOPP is a valuable asset to the data collection and price monitoring activities involved in this function. It enables DOER to provide information to policy makers who must act quickly in the event of an emergency.

DOER collects and posts pricing information from the SHOPP surveys for heating oil and propane on our website, www.mass.gov/doer. This information is updated weekly during the winter and monthly during the off-season. Numerous groups and consumers use these surveys to measure their prices against the state average price collected under SHOPP. DOER's website also contains consumer tip sheets for fuel assistance, oil heat contracts, oil heat maintenance, and natural gas.

In addition to our own website, DOER maintains the Commonwealth's **Winterheating.com** website. Started in late 2001, Winterheating.com is part of Massachusetts' effort to coordinate information on the Commonwealth's Energy Services. Besides DOER, other agencies linked to the Winterheating.com

include the Department of Housing and Community Development (DHCD), the Department Public Utilities (DPU), and the Division of Standards (DOS).

DOER also uses the SHOPP information during the New England States' and Energy Industry Conference Calls. From October through March, DOER staff participates in weekly calls regarding the winter fuels situation. The calls are hosted by the New England Governors' Conference (NEGC) and participants include energy offices in New England and New York; energy industry representatives including the Northeast Gas Association, ISO-New England; the U.S. Coast Guard, Massachusetts Petroleum Council and the U.S. DOE. Participants exchange data about heating oil, natural gas and electricity winter supplies and prices.

As in every winter, DOER uses information from its SHOPP surveys and the NEGC calls to advise the Massachusetts Emergency Management Agency (MEMA) on whether it should issue driver hour waivers for truck drivers of heating fuels. As previously mentioned, DOER utilized the SHOPP data when recommending a Driver Hour Waiver during the propane shortage.

Other meetings attended by DOER that utilize SHOPP data include the Massachusetts Department of Housing and Community Development's (DHCD) Energy Advisory Meetings. As part of its duties under its management of the Commonwealth's Weatherization Assistance Program (WAP), DHCD holds quarterly meetings on its weatherization and Low-Income Home Energy Assistance Program (LIHEAP), also known as fuel assistance. As a member of this group, DOER provides information on prices and supplies. DHCD briefs group members on the status of these federal programs including funds, allocations, and number of recipients.

The SHOPP program is a critical component in DOER's mission to provide accurate energy price information to the Commonwealth and its citizens. Massachusetts residents traditionally endure long and cold winters and knowing what prices are as well as where they are headed is extremely important. For these reasons, DOER looks forward to its continued participation in SHOPP.